

## CLAIMS

- [c1] 1. A method in a switch for identifying destination ports for communications, the method comprising:
- receiving a first communication having a virtual address;
  - identifying a first destination port for the virtual address from a mapping that maps virtual addresses to destination ports;
  - transmitting the first communication via the identified first destination port;
  - and
  - after transmitting the first communication,
    - receiving an indication to map the virtual address to a second destination port;
    - receiving a second communication having the virtual address;
    - identifying the second destination port for the virtual address from the mapping; and
    - transmitting the second communication via the identified second destination port
- wherein communications to the same virtual address are transmitted via different destination ports without modifying the virtual address.
- [c2] 2. The method of claim 1 wherein the first communication and the second communication are transmitted from the same source.
- [c3] 3. The method of claim 1 wherein the first communication and the second communication are transmitted to the same destination node.
- [c4] 4. The method of claim 1 wherein the first and the second communication are transmitted to different destination nodes.

[c7] 7. The method of claim 6 wherein each source port of the switch has its own mapping of virtual addresses to destination ports.

[c9] 9. The method of claim 1 wherein a virtual address is mapped to multiple destination ports and wherein communications are transmitted via each mapped-to destination port.

[c11] 11. The method of claim 1 wherein the communication is an InfiniBand Channel frame.

c13] 13. A switch for transmitting via destination ports communications received via source ports, comprising:

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a component that receives via a source port a communication with a virtual address, that identifies a destination port for the virtual address based on the mapping, and that transmits the communication via the identified destination port; and

a component that changes the mapping to map the virtual address to another destination port

so that when another communication is received with the virtual address, it is transmitted via the other destination port.

[c14] 14. The switch of claim 13 wherein the communications are transmitted from the same source.

[c15] 15. The switch of claim 13 wherein the communications are transmitted to the same destination node.

[c16] 16. The switch of claim 13 wherein the communications are transmitted to different destination nodes.

[c17] 17. The switch of claim 13 wherein the switch is in a network of switches and the virtual address identifies a path from a source node to a destination node within the network.

[c18] 18. The switch of claim 13 wherein the communications are received via the same source port of the switch.

[c19] 19. The switch of claim 18 wherein each source port of the switch has its own mapping of virtual addresses to destination ports.

[c20] 20. The switch of claim 13 wherein a source node that transmits the communications is not aware that the virtual address is mapped to the another destination port.

[c21] 21. The switch of claim 13 wherein a virtual address is mapped to multiple destination ports and wherein communications are transmitted via each mapped-to destination port.

[c22] 22. The switch of claim 13 wherein the communication is a Fibre Channel frame.

[c23] 23. The switch of claim 13 wherein the communication is an InfiniBand Channel frame.

[c24] 24. The switch of claim 13 wherein the switch is an interconnect fabric module.

[c25] 25. A method in a switch for transmitting communications, the method comprising:

receiving an indication to map a virtual address to a destination port of the switch;

receiving a communication having a virtual address and transmitting the communications via the destination port;

after transmitting the communications,

receiving an indication to map the virtual address to another destination port of the switch;

receiving other communication having the virtual address and transmitting the other via the other destination port

wherein the virtual address identifies a path through a network of switches.

- [c26] 26. The method of claim 25 wherein the communications are transmitted from the same source.
- [c27] 27. The method of claim 25 wherein the communications are transmitted to the same destination node.
- [c28] 28. The method of claim 25 wherein the communications are transmitted to different destination nodes.
- [c29] 29. The method of claim 25 wherein the switch is in a network of switches and the virtual address identifies a path from a source node to a destination node within the network.
- [c30] 30. The method of claim 25 wherein the communications are received via the same source port of the switch.
- [c31] 31. The method of claim 30 wherein each source port of the switch has its own mapping of virtual addresses to destination ports.
- [c32] 32. The method of claim 25 wherein a source node that transmits the communications is not aware that the virtual address is mapped to the second destination port.
- [c33] 33. The method of claim 25 wherein a virtual address is mapped to multiple destination ports and wherein communications are transmitted via each mapped-to destination port.
- [c34] 34. The method of claim 25 wherein each communication is a Fibre Channel frame.

[c35] 35. The method of claim 25 wherein each communication is an InfiniBand Channel frame.

[c36] 36. The method of claim 25 wherein the switch is an interconnect fabric module.

[c37] 37. A routing device for transmitting via destination ports communications received via source ports, comprising:  
mapping means for mapping virtual addresses to destination ports;  
means for receiving via a source port a communication with a virtual address and for transmitting the communications via a destination port to which the virtual address maps; and  
means for changing the mapping to map the virtual address to another destination port  
so that when another communication is received with the virtual address, it is transmitted via the other destination port.

[c38] 38. The routing device of claim 37 wherein the communications are transmitted from the same source.

[c39] 39. The routing device of claim 37 wherein the communications are transmitted to the same destination node.

[c40] 40. The routing device of claim 37 wherein the communications are transmitted to different destination nodes.

[c41] 41. The routing device of claim 37 wherein the routing device is in a network of routing devices and the virtual address identifies a path from a source node to a destination node within the network.

- [c42] 42. The routing device of claim 37 wherein the communications are received via the same source port of the routing device.
- [c43] 43. The routing device of claim 42 wherein each source port of the routing device has its own mapping of virtual addresses to destination ports.
- [c44] 44. The routing device of claim 37 wherein a source node that transmits the communications is not aware that the virtual address is mapped to the another destination port.
- [c45] 45. The routing device of claim 37 wherein a virtual address is mapped to multiple destination ports and wherein communications are transmitted via each mapped-to destination port.
- [c46] 46. The routing device of claim 37 wherein the communication is a Fibre Channel frame.
- [c47] 47. The routing device of claim 37 wherein the communication is an InfiniBand Channel frame.
- [c48] 48. The routing device of claim 13 wherein the routing device is an interconnect fabric module.